

## From academics to Aidemics: Unpacking the human–AI symbiosis in higher education

Adem Yurdunkulu<sup>a</sup>, Mehmet Akin Bulut<sup>b</sup>, Ahmet Göçen<sup>c,\*</sup>

<sup>a</sup> Ibn Haldun University, School of Education, İstanbul, Türkiye

<sup>b</sup> Ibn Haldun University, School of Education, Center for Innovative Learning and Teaching, Artificial Intelligence: CILT-AI, İstanbul, Türkiye

<sup>c</sup> Afyon Kocatepe University, Faculty of Education, Afyonkarahisar, Türkiye

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### ABSTRACT

The integration of artificial intelligence (AI) into higher education is reshaping both academic roles and organizational practices. This transformation is not merely technical; it also introduces psychological and ethical tensions as academics negotiate new forms of work. This qualitative study advances the concept of Aidemics—academics who efficiently, ethically, and critically employ AI to enhance their professional practice—and examines how AI reconfigures intellectual tasks while challenging traditional academic identities. Drawing on semi-structured interviews with twenty academics (informed by five pilot interviews), we show that Aidemics engage in a symbiotic, human-in-the-loop relationship with AI: they exploit efficiencies for routine tasks, yet safeguard creative and critical work, actively auditing AI outputs and setting clear boundaries of use. Participants also surface structural concerns—framed as AI colonialism—about the potential of AI to entrench power asymmetries and epistemic inequities in global knowledge production. Key challenges include hallucinations, erosion of human agency, and unequal access to AI tools. We argue for policies and professional-development strategies that preserve human agency and ethical judgment while enabling responsible, explainable, and context-sensitive AI use. The findings specify the competencies of Aidemics and outline supports for balanced human–AI collaboration at individual and institutional levels.

### 1. Introduction

Artificial intelligence (AI) is rapidly transforming higher education, eliciting both enthusiasm and concern among stakeholders. AI capabilities are now embedded across teaching, research, assessment, and administration (Chubb et al., 2022; Döger & Göçen, 2025; Pigola et al., 2023; Pinzolits, 2023; Pisica et al., 2023; Zawacki-Richter et al., 2019). This integration has generated polarized responses within the academic community. On one hand, some scholars express AI-induced anxiety about the future of academic careers, alongside concerns over potential misuse and negative impacts on student learning (Verano-Tacoronte et al., 2025). On the other hand, proponents highlight substantial benefits, including real-time support, enhanced creativity, improved efficiency, and personalized learning experiences (Hamzah et al., 2025; Nguyen, 2025; Varghese, 2024). These divergent perspectives have intensified with the adoption of advanced large-language models such as ChatGPT, Gemini, and Claude, which continue to redefine both the possibilities and challenges of teaching and learning. Given these rapid

developments and their far-reaching implications, educators, researchers, and policymakers must critically evaluate AI's influence on information dissemination, pedagogical practices, and broader societal outcomes (Abrams, 2023).

As AI reshapes the functions and responsibilities of educators, Bernard (2024) argues that the reactions to AI in the higher education context should be neither driven by outright rejection nor by uncritical acceptance. She asserts that "*Fear of AI should not be the reason we reject AI, and fear of being left behind by AI's rapid evolution should not be the reason we accept it hastily*". Instead, it is logical that institutions and instructors alike must adopt a balanced, reflective stance—one grounded in a resilient psychological and organizational readiness—to engage with AI thoughtfully, harness its pedagogical potential, and safeguard academic integrity. Yet academics sometimes face time constraints and limited flexibility, hindering their ability to experiment with and truly adopt AI tools (Kizilcec, 2024).

In response to these competing perspectives, academia is witnessing the emergence of a new identity among academics in higher education

\* Corresponding author.

E-mail addresses: [adem.yurdunkulu@ihu.edu.tr](mailto:adem.yurdunkulu@ihu.edu.tr) (A. Yurdunkulu), [akin.bulut@ihu.edu.tr](mailto:akin.bulut@ihu.edu.tr) (M.A. Bulut), [agocen@aku.edu.tr](mailto:agocen@aku.edu.tr) (A. Göçen).

institutions, wherein AI seamlessly integrates with academics' expertise to co-construct knowledge and optimize workflows. This shift necessitates reexamination of the academic role, echoing Briggs' (2005) earlier call to define academic competencies in response to the transition from campus-based teaching to online delivery.

### 1.1. The roles of academics

Wardell (2021) identifies the core responsibilities of an academic as service, teaching, and research, encompassing thirty-one subtasks ranging from grant writing to designing course plans, as seen in Fig. 1. Before her, Briggs (2005, pp. 258–259) summarized the existing literature and various studies on the evolving roles of academics. For him, an academic's role was traditionally well-defined, encompassing subject expertise, teaching, and research. However, this role expanded significantly in later years, incorporating technical, managerial, pedagogical, and social roles. Academics were expected to fulfill a variety of roles, including being subject matter experts, effective listeners, communicators, coaches, facilitators, mentors, problem-solvers, designers, supporters, and resource coordinators. Additionally, eleven distinct roles

were frequently cited in academic role classifications: technologist, manager, co-learner, designer, knowledge expert, researcher, facilitator, assessor, adviser-counselor, e-tutor, and mentor. More recently, Rosewell and Ashwin (2019) contended that while academic roles are often categorized as teacher, researcher, academic professional, and manager, the essence of being an academic extends far beyond these labels. They emphasize that academic freedom, intellectual stimulation, and a sense of vocation are integral to shaping academic identity.

As AI challenges the traditional understanding of academic roles in this age of technological disruption, these diverse roles must be reconsidered to reflect the changing landscape of intellectual labor and AI-augmented scholarship. To capture this shift, we introduce the term Aidemic, describing academics who use AI efficiently, ethically, and critically to augment traditional service, teaching, and research roles. Drawing on human-AI close collaboration (Arar et al., 2024; Mahmud et al., 2023) and human-AI hybrid intelligence frames (Cukurova, 2024), educators and AI systems can collaborate as co-designers, co-navigators, and co-reflectors—fostering co-creative partnerships that transcend conventional tool use.

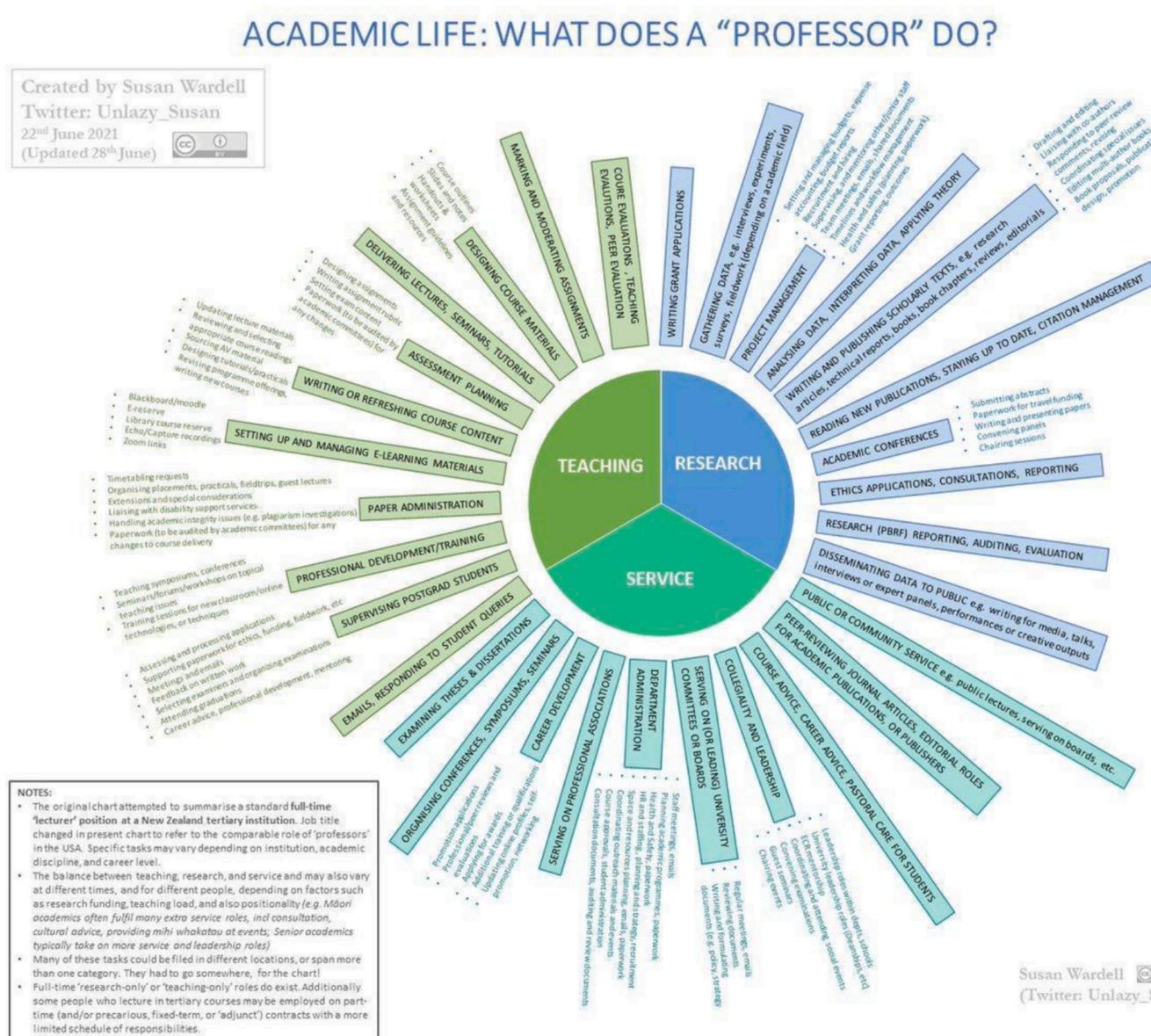


Fig. 1. Academic tasks of academics (taken from Wardell, 2021).

## 1.2. Theoretical background

In recent years, scholarship has increasingly mapped AI's applications in higher education and the associated opportunities and challenges (Zawacki-Richter et al., 2019); at the same time, there is a need for more interdisciplinary research integrating psychological methods to probe AI-human interaction (Wu et al., 2025, p. 16) and for socio-technical analyses of how technologies reconfigure roles, interactions, and structures (Baxter & Sommerville, 2011; Mumford, 2006). As such, psychological and human-automation interaction research indicates that AI can reduce cognitive load yet may undermine cognitive engagement and critical thinking when over-relied upon (Jose et al., 2025; Zhai et al., 2024), suggesting the need for designs that support autonomy and higher-order thinking in AI integration in educational settings.

Grounded frameworks of human learning such as Cognitive Load Theory (Sweller, 1988), Bloom's Taxonomy (Bloom, 1956), and Self-Determination Theory (Deci & Ryan, 1985) highlight the central roles of cognitive and motivational/psychological factors in learning, which should be considered when designing AI-enhanced educational contexts (Koć-Januchta et al., 2022). Cognitive Load Theory and Bloom's Taxonomy emphasize cognitive processing and learning objectives, while Self-Determination Theory focuses on psychological needs for autonomy, competence, and relatedness. Through another lens, sociotechnical perspectives posit that technologies do not merely replace tasks but actively reconfigure roles, interactions, and institutional structures. Frameworks such as Actor-Network Theory and broader sociotechnical systems theory offer valuable lenses for understanding how academics and AI co-evolve in practice (Wei, 2023). By engaging with these theoretical traditions, the concept of "Aidemics" introduced in this paper positions academics not merely as tool users, but as critical, adaptive participants navigating shifting cognitive and institutional landscapes—thus aligning the study with both psychological and sociotechnical perspectives.

To enrich the theoretical framing and present the gap in researching "Aidemics," this paper draws on Sociotechnical Systems (STS) theory, which emphasizes the joint optimization of technical and social subsystems in organizational design. STS, rooted in the work of Trist and Bamforth (1951) and Emery (1959), seeks a balance between technological performance and the quality of work life—highlighting that introducing AI into academia should not just prioritize efficiency, but also preserve autonomy, meaningful engagement, and participatory work design. Building on STS for AI-specific challenges, emerging models such as the intelligent and human-centered AI systems propose a hierarchical, multi-level approach—spanning individual, organizational, ecosystem, and societal domains—to ensure AI integration remains in harmony with human-centric and ethnographically grounded spheres (Hollan et al., 2000).

Psychologically, scholars warn of automation bias—the tendency for individuals to over-rely on technology-generated suggestions and neglect contradictory information—underscoring the importance of fostering critical engagement rather than passive acceptance of AI tools (Lyell & Coiera, 2017; Parasuraman & Riley, 1997). Furthermore, research into work design and job control framed as Job Demand–Control Model by Karasek (1979) suggests that higher autonomy and decision-making authority correlate with better motivation, innovation, and well-being—a critical consideration for academics navigating AI-augmented roles. Incorporating these perspectives can help position "Aidemics" not just as adaptive users of AI but as active agents in the sociotechnical design of AI-mediated academic work, preserving both the psychological and social integrity of scholarly practice. In doing so, the paper extends existing scholarship—such as those above-mentioned inquiries and Briggs' (2005) work on evolving academic roles—by demonstrating how AI reshapes scholarly practices and expectations, thereby offering novel insights into the mechanisms of responsible AI adoption in higher education.

## 1.3. Purpose of the study

With rapid AI advances, higher education institutions and academics are increasingly experimenting with AI tools across core functions while negotiating implications for work, identity, and integrity (Watermeyer et al., 2024). AI is being applied to personalize learning, support assessment and feedback, streamline tasks (Chen et al., 2025; Göcen & Döger, 2025; Slimi, 2023; Zhang, 2023), enhance decision-making (Wang, 2021), and enable big data analysis and learning analytics (Ahmad et al., 2022; Hamal et al., 2022; Ifenthaler & Schumacher, 2023). Additionally, AI advances teaching methods (Sharma, Gulati, et al., 2022), academic writing (Nguyen et al., 2024), student advising (Akiba & Fraboni, 2023), virtual labs (Shi & Xuwei, 2023), gamification (Babu & Moorthy, 2024), policy-making (Ray, 2023), and grant writing (Seckel et al., 2024). However, this evolution raises significant concerns about scholarly authenticity, academic deskilling, and erosion of intellectual labor (Octaberlina et al., 2024; Perkins & Roe, 2024; Watermeyer et al., 2024). Amid this complexity, questions have emerged about how AI transforms academic roles and traditional practices across psychological and sociotechnical dimensions.

Building on this foundation, the present study aims to explore how academics use AI technologies and how these tools transform their academic roles. Specifically, the research seeks to uncover the academic, social, technological, psychological, and institutional features that together constitute "Aidemics"—a term defined here as academics in higher education who extensively employ AI tools in their professional endeavors with efficiency, ethical consideration, and critical awareness. These individuals leverage AI to co-create quality outputs across a variety of professional activities, including academic research, teaching methodologies, curriculum development, data analysis, and administrative processes, all within symbiotic and hybrid human-AI relationships (See, Arar et al., 2024; Cukurova, 2024; Mahmud et al., 2023). To examine this phenomenon systematically, the study addresses two research questions (RQs):

**RQ1.** In what ways do AI technologies transform the traditional roles of academics?

**RQ2.** What are the academic, social, technological, psychological, and institutional features that define the phenomenon of "Aidemics"?

## 2. Methodology

This study employs a qualitative research methodology, specifically using semi-structured interviews to gain in-depth insights into how academics experience and integrate AI into their work. The research adopts a phenomenological design, chosen for its efficacy in exploring the lived experiences and perceptions of individuals within complex social contexts. Phenomenology enables deep, subjective interpretation of personal experiences (Neubauer et al., 2019), making it particularly well-suited for understanding how academics navigate the integration of AI into their socio-academic practices and for addressing the research questions that guide this investigation.

The study focuses on academics representing diverse disciplines and institution types who either extensively or moderately employ AI across various professional activities. As indicated in Table 1, participants engage with AI tools in multiple capacities, including curriculum development, data analysis, research methodologies, editing, and administrative responsibilities. This diversity in both disciplinary backgrounds and AI usage patterns allows for a comprehensive examination of the Aidemics phenomenon across different academic contexts.

### 2.1. Participants

The study was conducted in Türkiye during the 2024–2025 academic year using purposive sampling to select academics from varied disciplines, institutions, and levels of AI proficiency. Draft interview

**Table 1**

The information about participants in the study.

Tag Names	Field of Expertise	Title	General Information about Participants
Tango	English Language Teaching	Assoc. Prof.	These participants, who are early adopters, use AI tools for multiple purposes, from research and administrative tasks to statistics.
Alpha	Education Management	Assoc. Prof.	They are also actively engaged in posting and podcasting on AI Literacy and prompting, AI Tools for Teaching, AI Tools for Research, AI Tools for Organizing, AI Tools for Assessment, and AI Tools for Students.
Mike	Educational Technology	Professor	
Bravo	Educational Technology	Assoc. Prof.	
Romeo	Educational Technology	Assist. Prof.	
Sierra	Sociology	Assoc. Prof.	
Oscar	Educational Technology	Professor	
Yankee	Statistics	Professor	
Echo	Media and Communication	Assoc. Prof.	
Quebec	English Language Teaching	Assoc. Prof.	
Uniform	English Language Teaching	Assoc. Prof.	
Foxtrot	Psychology Counseling	Lecturer (PhD)	
November	Education Sciences	Assoc. Prof.	
India	Education Sciences	Assoc. Prof.	
Juliett	English Language Teaching	Assoc. Prof.	
Xray	Education Sciences	Professor	
Zulu	Educational Measurement	Assoc. Prod.	
Kilo	Science Education	Assoc. Prof.	
Victor	English Literature	Assoc. Prof.	
Lima	Social Studies	Assoc. Prof.	

questions were first tested with five academics ( $n = 5$ ) from different departments as a pilot phase. Their feedback guided refinement of the interview protocol and helped identify emerging themes, but only responses from the subsequent 20 main participants were included in the findings.

The 20 participants were selected based on criteria ensuring diverse AI knowledge and backgrounds. While most were of Turkish origin, they possessed substantial international experience from extended periods in the United States, China, Germany, and Qatar, spanning master's degrees, doctorates, post-doctoral positions, visiting scholarships, and professorships. This global exposure positioned them to offer transnational perspectives on AI integration. Participants were recruited through email, phone calls, and face-to-face meetings, facilitated by geographical and interpersonal proximity within Türkiye.

To capture varied perspectives, the study deliberately included both AI experts and moderate users. The first group ( $n = 8$ ) comprised early adopters with extensive AI experience—individuals from educational technology departments, academics actively integrating AI into their work, and scholars publishing on AI topics. Screening via Google Scholar identified those with substantial AI-focused publications; for instance, "Bravo" has an h-index exceeding 50 with extensive publications on AI in education, while "Oscar" has approximately 33,000 citations in educational technology. The second group ( $n = 12$ ) consisted of moderate users with no AI-focused publications but demonstrating practical AI experience in their daily work, primarily using tools like ChatGPT for editing and literature reviews. Two international participants from Germany (Victor) and Australia (Lima), interviewed in English, were included to enhance triangulation and cross-cultural insights. This

composition ensured maximum variability in AI engagement, with data collection concluding upon reaching thematic saturation.

Analysis of the moderate users revealed usage variation: some of them used AI tools occasionally for summarizing ideas, while others expressed concerns about overreliance potentially diminishing critical thinking. The dominant themes—including time efficiency, ethics, originality, research enhancement, personalized teaching, and concerns about overreliance—emerged across both groups.

With informed consent, publicly available social media accounts of early adopters were analyzed anonymously. This revealed active sharing of content related to AI literacy, teaching innovations, research methodologies, assessment practices, and student support. For example, "Romeo" and "Bravo" regularly shared visuals, videos, and blog posts offering prompting advice and AI tool recommendations for higher education.

All participants were assigned flight-related pseudonyms (e.g., Tango, Alpha) to ensure anonymity. The sample included professors, associate professors, assistant professors, and lecturers spanning fields from Educational Technology to Sociology. Table 1 summarizes participants' backgrounds, disciplinary affiliations, and institutional contexts.

Frequently used AI and digital tools by all participants in Table 1 included ChatGPT, Gemini, Typeset, Gamma, Perplexity, Claude AI, Bard, Scite, Quizlet, Grammarly, Deeply, Canva AI, among others. For instance, "Uniform" stated, "*ChatGPT is often part of my daily academic routine,*" and "Foxtrot" noted, "*I heavily rely on ChatGPT for translation and grammar checks in my studies, ensuring accuracy in multiple languages. Additionally, I use ChatGPT for administrative tasks like preparing forms and drafting emails, and Gamma for presentations.*" While ChatGPT dominated discussions among both early adopters and normal users, the study's findings encompass a broader range of AI tools.

## 2.2. Data collection

Data were collected primarily through semi-structured interviews, allowing flexibility to probe deeper into participants' experiences while maintaining a consistent structure across all sessions. The interview protocol comprised 14 questions, as presented in Table 2, designed to explore multiple dimensions of AI integration in academic work.

The interviews sought to understand how AI is integrated into academic roles by first asking participants to describe the specific AI tools they use regularly and detail how these tools support their academic duties. To gain comprehensive perspectives, participants were prompted to reflect on their initial experiences with AI, including difficulties encountered during integration. They were also encouraged to share their views on how AI tools could be improved for academic use, how AI might affect the future of higher education, and concerns about the digital divide in AI access.

Interview questions were emailed to interested participants, who were requested to provide available time slots. Each interview lasted between 25 and 60 min and was conducted either face-to-face or via video conferencing, as shown in Table 3, depending on participant preference and geographical location.

## 2.3. Data analysis

All interviews were transcribed verbatim and analyzed using thematic analysis (Braun & Clarke, 2006). Coding was conducted manually and iteratively: initial, inductive codes were generated line-by-line, refined through team discussions, and checked back against the data for internal consistency. Although no dedicated CAQDAS (e.g., NVivo, ATLAS.ti) was used, we followed a systematic manual protocol and maintained a versioned codebook and audit trail. To support transparency, we provide the interview guide, sample responses, and representative quotations for each theme. Given the sensitivity of academic identity, all interviews were conducted anonymously and confidentially.

Following Braun & Clarke's (2006) six steps, we (1) familiarized

**Table 2**

Interview questions &amp; some sample responses.

Integration and Use of Artificial Intelligence in Academic Roles	
Questions	Sample answers
1) How have you integrated artificial intelligence into your academic roles, particularly in research, teaching, and administrative tasks (such as teaching, research, project writing, course scheduling and curriculum development, and student engagement)?	<i>"I have started to use artificial intelligence as my personal assistant. In this context, I make extensive use of AI across various dimensions of academic life, including teaching, research, education, projects, and community development. For instance, I often rely on AI for generating ideas, particularly when it comes to finding suitable titles for a project."</i>
2) Which specific AI tools are part of your daily academic routine, and in what ways do you use them?	
3) How does AI help you stand out or excel in your work?	<i>"I sought support from artificial intelligence to more easily identify sources related to my field of study."</i>
4) In your opinion, in what ways does AI contribute the most to academics in general?	
<i>Initial Experiences and Changes in Productivity</i>	
5) Could you describe your first experience with using AI tools for academic tasks? For example, what were your initial impressions when you used it for literature review or analysis?	<i>"As a first impression, what truly excited me was the moment I began using ChatGPT. I must admit, I felt a genuine sense of excitement. Why? Because the fact that it can perform a function on your behalf and simplify your work is, indeed, something that excites a person."</i>
6) Can you provide examples of how AI has significantly increased your efficiency in your professional responsibilities?	
<i>Challenges, Limitations, and Ethical Considerations</i>	
7) What challenges or limitations have you encountered in incorporating AI into your academic work?	
8) Are there any limitations of AI tools that need to be addressed for better use in academic life?	
9) What ethical challenges do you face when using AI tools in your academic duties?	
10) How do you address ethical concerns and biases that may arise from the use of AI in academia?	
11) How do you manage the privacy of students and staff when using AI technologies?	
12) Do you think AI tools contribute to greater transparency and inclusivity in the academic world?	
<i>Impact on Traditional Practices and Future Implications</i>	
13) How do you perceive the impact of AI on traditional educational practices and academic roles?	
14) What do you think will be the future implications of AI integration in higher education? How do you envision the role of AI in academic responsibilities in the future?	
<i>Additional Consent</i>	
With your permission, may we include your tweets and social media posts in the research data section of our study?	

ourselves with the data, (2) generated initial codes, (3) searched for candidate themes, (4) reviewed themes against coded extracts and the full data set, (5) defined and named themes, and (6) produced the report. Practically, this entailed repeated reading of transcripts, open coding to capture data-close meanings, iterative merging/splitting of codes into sub-themes, and collaborative refinement of theme boundaries. A thematic map was developed to clarify relationships among themes. The final analysis identified a core theme—"Who are Aidemics"—surrounded by nine interrelated dimensions: (1) using AI tools for multiple academic tasks, (2) demonstrating AI literacy, (3) showing efficient prompting skills, (4) employing AI as a personal assistant, (5) protecting creativity and critical thinking, (6) navigating ethical issues and potential biases, (7) adapting teaching practices to integrate AI, (8) maintaining human expertise and judgment, and (9) advocating for equitable AI access.

### 2.3.1. Operationalizing the coding process

To make the transition from raw talk to claims auditable, we implemented a coding pipeline and document it across [Tables 6–12](#). Each table demonstrates the progression codes → categories (sub-themes) → themes with verbatim quotes that evidence each category. For full traceability, we provide an expanded exemplar ([Table 4](#)) showing raw excerpt → initial code → category → theme → frequency.

### 2.3.2. Coding procedure

Each transcript was coded line-by-line to identify recurring concepts, practices, and concerns. For example, in [Tables 4 and 6](#), codes such as *editing, proofreading, grammar, assistance*—instances where participants described AI as an multitasked assistant—were grouped into the category *AI as Multi-tasking Assistant*, which, together with *AI as Research and Teaching Fellow, AI for Creativity/Brainstorming, and AI for Inclusion and Equalization*, formed the theme *AI as a Multifaceted Tool in Academia*. This hierarchical structure (codes → categories → themes) was applied consistently across all themes presented in [Tables 6–13](#). An expanded version of [Table 6](#) is presented under [Table 4](#) to illustrate the end-to-end pipeline on real excerpts.

### 2.3.3. Quantification approach, unit of analysis and frequency reporting

The unit of analysis was the participant. When a participant mentioned a concept multiple times across different interview questions or contexts, it was counted only once. This approach captures the prevalence of themes across the sample without inflating frequencies through repeated mentions by the same individual. For instance, if "Tango" discussed AI's role in brainstorming in three separate responses, this contributed one count to the "*AI for Creativity/Brainstorming*" category.

[Tables 6–12](#) report frequencies where n represents the number of participants who mentioned concepts within that category. It is important to note that not all 20 participants discussed every thematic area in depth; therefore, denominators vary by theme based on interview content relevance. For example, detailed discussions about AI hallucinations emerged primarily among the 8 early adopters and 4 normal users who had encountered technical limitations, yielding a denominator of 12 for that analysis.

### 2.4. Trustworthiness and credibility

To ensure trustworthiness and credibility, several strategies were applied. Credibility was enhanced through prolonged engagement with the data, iterative coding, and peer debriefing within the research team. Representative quotations were selected to illustrate themes and provide evidence for interpretations, increasing transparency. Transferability was supported by providing thick descriptions of participants' contexts and experiences, allowing readers to assess relevance to their own settings. Dependability was strengthened by maintaining an audit trail of coding decisions, theme refinements, and research memos documenting the analytical process. Confirmability was ensured through reflexivity, with researchers critically reflecting on their own positions and assumptions, as well as through the use of direct participant voices to ground interpretations in the data. These strategies collectively reinforced the rigor, trustworthiness, and credibility of the analysis.

## 3. Findings & discussion

This study offers a nuanced understanding of the transformative role of AI in reshaping higher education, with a specific focus on the emerging profile of AI-enhanced academics, referred to as "Aidemics." By deeply exploring the experiences and perspectives of academics integrating AI into their professional practices, the research findings provide valuable insights into the evolving roles of academics and the future direction of AI in higher education. The key findings are detailed under the following headings:

**Table 3**

Screenshots from interviews.

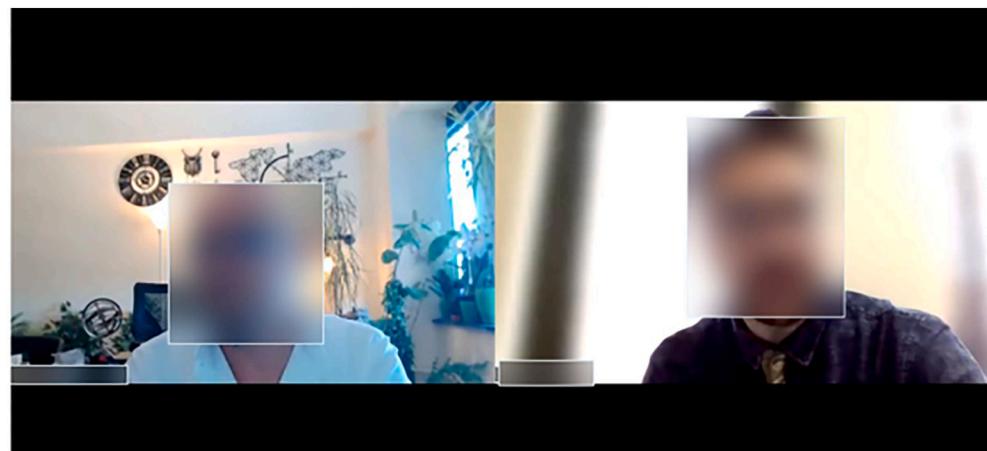
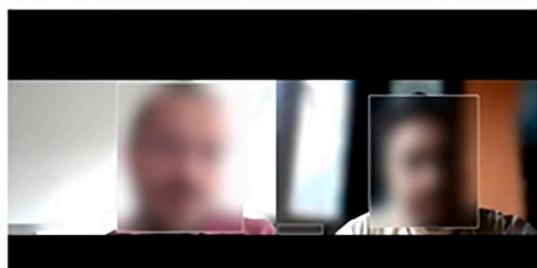
**Navigating the Artificial Intelligence Landscape in Higher Education:**  
**A Qualitative Inquiry of Academics**

**Integration and Use of Artificial Intelligence in Academic Roles**

- 1) How have you integrated artificial intelligence into your academic roles, particularly in research, teaching, and administrative tasks (such as teaching, research, project writing, course scheduling and curriculum development, and student engagement)?
- 2) Which specific AI tools are part of your daily academic routine, and in what ways do you use them?
- 3) How does AI help you stand out or excel in your work?
- 4) In your opinion, in what ways does AI contribute the most to academics in general?

**Initial Experiences and Changes in Productivity**

- 5) Could you describe your first experience with using AI tools for academic tasks? For example, what were your initial impressions when you used it for literature review or analysis?
- 6) Can you provide specific examples of how AI has significantly increased your efficiency or effectiveness in your professional responsibilities?

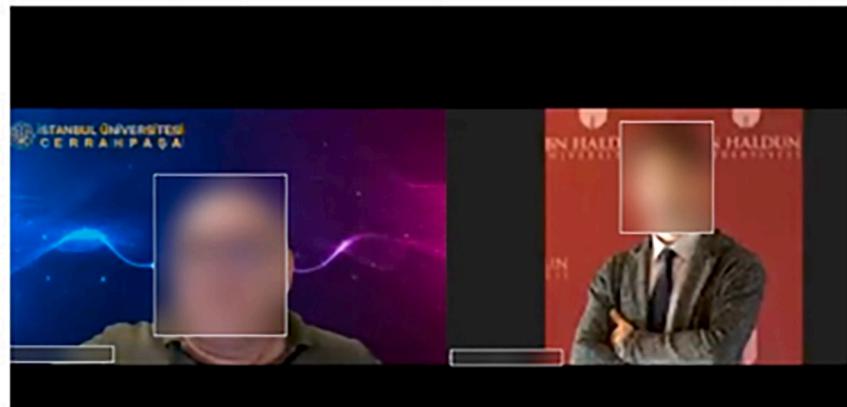
**Impact on Traditional Practices and Future Implications**

- 13) How do you perceive the impact of AI on traditional educational practices and academic roles?

- 14) What do you think will be the future implications of AI integration in higher education?

How do you envision the role of AI in academic responsibilities in the future?

(continued on next page)

**Table 3 (continued)**

### **Impact on Traditional Practices and Future Implications**

13) How do you perceive the impact of AI on traditional educational practices and academic roles?

14) What do you think will be the future implications of AI integration in higher education?

How do you envision the role of AI in academic responsibilities in the future?

### **Additional Consent**

- With your permission, may we include your tweets and social media posts in the research data section of our study?

**Table 4**

Example from the existing [Table 6](#) below (expanded):

Raw Response Examples	Initial Codes	Category (Sub-theme)	Theme	Frequency (n/N)
"I edit with ChatGPT"; "ChatGPT helps with projects"; "I use AI for proofreading"	Editing, proofreading, grammar check, daily tasks	AI as a Multi-tasking Assistant	AI as a Multifaceted Tool in Academia	14/20
"AI reads articles and prepares analysis reports"; "I use AI for literature review"; "AI helps summarize research"	AI assist, research support, literature analysis, summary generation	AI as Research and Teaching Fellow	AI as a Multifaceted Tool in Academia	13/20
"I use AI to get ideas"; "brainstorming with ChatGPT"; "AI generates multiple perspectives"	Idea generation, brainstorming, creative support	AI for Creativity/ Brainstorming	AI as a Multifaceted Tool in Academia	11/20
"The difference between nonnative and native speakers disappeared!" "I get inclusive advice"	Inclusive, language barrier reduction, equal access	AI for Inclusion and Equalization	AI as a Multifaceted Tool in Academia	10/20

Note. [Table 4](#) shows one theme's categories as an exemplar; all subsequent tables (6–12) use the same codes → category → theme structure with quotations.

### **3.1. Defining Aidemics**

The data consistently highlights the emergence of a new academic profile driven by the increasing integration of AI tools into educational settings. Drawing from both the respondents' experiences and the literature introduced earlier, we propose to use the term "Aidemics" as seen in [Fig. 2](#) to describe academics who display symbiotic relationships with AI tools and are proficient in leveraging AI technologies to enhance their teaching, research, administrative roles, and more. However, this definition is used for the purpose of this study to highlight a new academic-AI close collaboration getting to be more often noticed both in literature and participants' ideas ([Arar et al., 2024](#); [Cukurova, 2024](#); [Mahmud et al., 2023](#)).

The findings indicate that AI-empowered, high-tech approaches will significantly impact teaching and learning practices, making the adoption of new academic profiles essential. Aidemics are genuinely early adopters who exhibit several key qualities:

a) **Use AI tools for many tasks and goals:** Aidemics utilize AI platforms extensively, knowing each tool's specific strengths and limitations. Tango, who has been involved in LLM and chatbot

development projects, mentioned that "*AI tools enable a single person to do the work that previously required a team of ten, acting as a one-person orchestra.*" This proficiency allows Aidemics to maximize the benefits of AI, particularly in routine and administrative tasks, thereby freeing up time for more intellectually demanding activities. Below is [Table 5](#), which shows AI-assisted automation tools commonly utilized by academics.

- b) **Possess a high level of AI literacy:** Aidemics identity requires a deep understanding of AI technologies and their applications in higher education. Respondents emphasized the importance of this literacy. Foxtrot told, "*When I first used AI tools, the most obvious feeling I had was questioning whether what I was doing was ethical. Over time, my concern about using AI tools ethically in my academic work diminished as I developed conscious usage skills.*" This reflects the necessity for Aidemics to use AI to critically evaluate its outputs and integrate it thoughtfully into their work. This insight is in line with studies that emphasize AI literacy and the importance of ethical and conscious use of AI in academia ([Bahr, 2024](#); [Lo, 2024](#); [Song, 2024](#)).
- c) **Display efficient prompting skills:** These academics employ efficient prompts to steer their work, saving time and allowing them to

# Who are Aidemics?

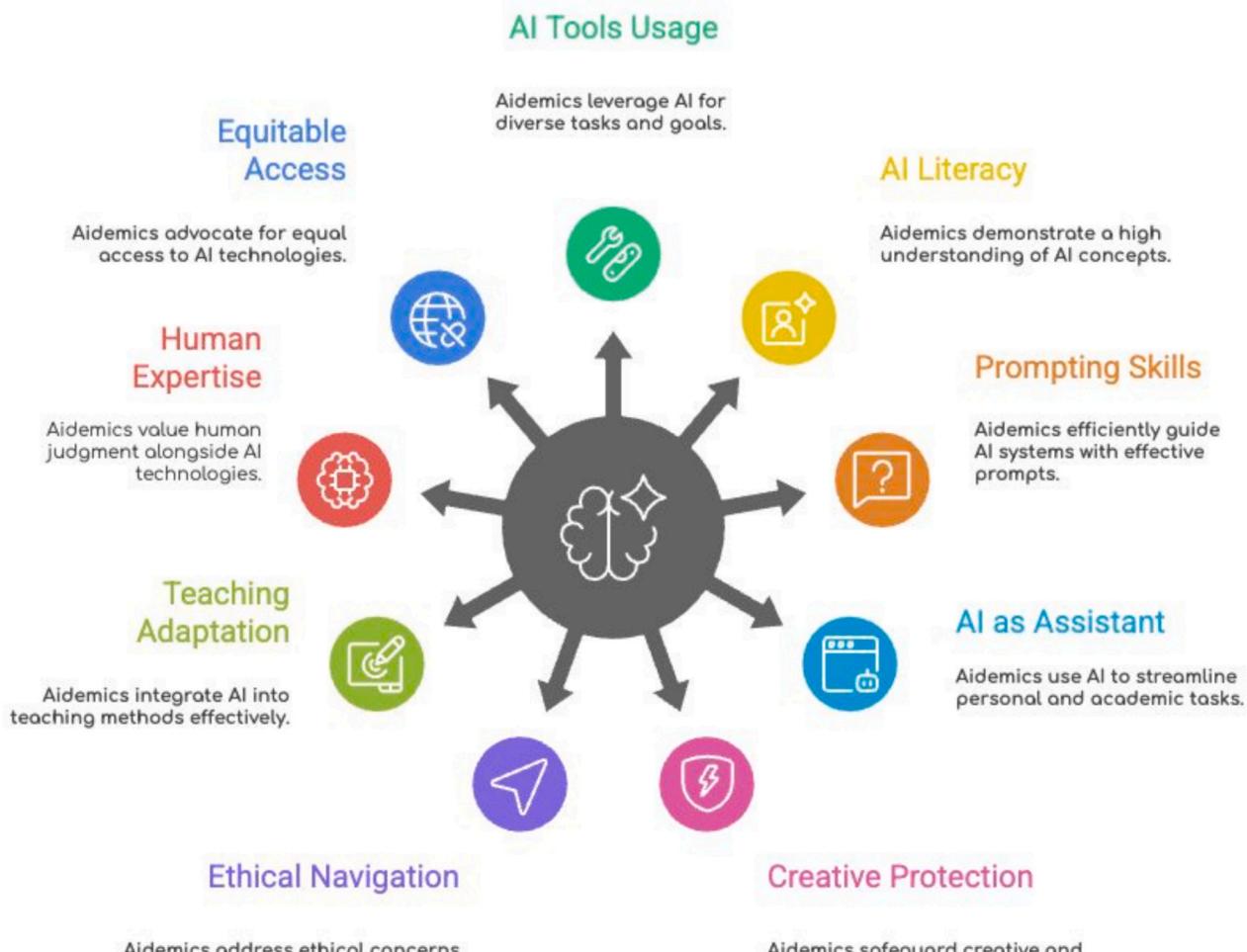


Fig. 2. Who are Aidemics?

focus more on critical aspects that require active thinking. Bravo highlighted the impact of efficient prompting among academics and shared several posts to help others use efficient prompts. Most participants echoed Alpha's view that "asking the right questions to obtain accurate results is significantly more important than performing calculations and following established procedures," as the initial question formulation involves a highly creative mindset. This view aligns with studies on AI-integrated 21st-century skills, particularly those emphasizing communication, creativity, and problem-solving skills in academic practices (Giray, 2023; Tuomi, 2022).

**d) Utilize AI as a personal assistant by streamlining standard academic operations:** By employing AI as a personal assistant, Aidemics achieve greater efficiency in their work. This efficiency is crucial in an academic environment where time is often a limiting factor. Bravo provided a compelling example: "There are many different AI tools I use to speed up tasks I'm familiar with. By using them, I avoid wasting time and efficiently create lesson plans and receive feedback on the curriculum." Streamlining standard operations through AI creates more space for these crucial educational outcomes. Alpha noted, "AI frees time, allowing academics to focus on developing high-order skills in their students using these tools." Lima said, "I use ChatGPT to explain papers and ChatPDF for quick review," which

signifies AI's role in saving time. These experiences are consistent with studies highlighting the assistive role of AI and the familiarity required to integrate it effectively into academic routines (Ou et al., 2024; Pividori & Greene, 2024).

**e) Protect creative and critical thinking in their academic work:** While AI can handle routine tasks, Aidemics prioritize creative and critical aspects of their work. They recognize the limitations of AI in generating original thought and rely on their expertise to guide AI-generated outputs. Victor critically observed, "AI is not a game changer; it's just a tool. It doesn't offer the sophistication needed for high-level academic work." India added that "excessive reliance on AI tools may pose challenges for critical thinking and originality, distancing academics from essential skills like research, writing, and analysis. Solely relying on these tools can lead to gaps." This concern is also discussed in studies emphasizing the ethical challenges and critical evaluation of AI in academia (Bahr, 2024; Dhaliwal, 2023; Song, 2024; Zhai et al., 2024).

**f) Navigate ethical considerations and potential biases associated with AI use in academia:** Aidemics critically evaluate AI tools' epistemological implications in knowledge creation and validation, being mindful of AI colonialism along with a focus on multiple fact-checking. Mike addressed ethical considerations, saying LLMs create

**Table 5**  
AI tools commonly used by academics.

AI Tools Used by Academics	Primary Purpose	Citations
ChatGPT	Academic writing assistance: grammar, clarity, readability	ChatGPT benefits academia by supporting research tasks and academic writing (Nemtallah et al., 2024; Zhou, 2024), enhancing learning in several fields (Dirks-Naylor, 2024), and promoting accessibility (Wilkinson et al., 2024), while its adoption depends on ease of use, responsible application, and AI literacy among students (Acosta-Enriquez et al., 2024; Ajalo et al., 2025; Strzelecki et al., 2024).
Perplexity AI	AI-assisted literature search, filtering, summarization	Perplexity AI enhances academia by improving academic writing and personalized learning (Alonso et al., 2024; Lin et al., 2024; Malik et al., 2023), influencing academic integrity and raising plagiarism concerns (Duppss, 2023; Vidaurre et al., 2024), while also presenting ethical and practical challenges that require frameworks to balance AI's benefits with human creativity and equitable access (Cacho, 2024; Doğan et al., 2024; Kizilcec, 2024).
Elicit	AI-assisted literature search, filtering, summarization	AI in academia enhances learning and research through inquiry-based approaches and personalized support (Anthea & Claudia, 2024; Fenske & Ott, 2024; Malik et al., 2023), aids non-native English speakers in academic writing (Anthea & Claudia, 2024), improves student performance with educational applications (Almasri, 2024; Martin et al., 2024), and streamlines research processes with tools that simplify information management (Michalak, 2024).
NotebookLM	AI-assisted multimodal content generator	Google's NotebookLM, an AI research assistant that transforms dense academic content into multimodal formats like FAQs, study guides, and talk-show style "Deep Dive" discussions, enhances accessibility and engagement—especially for second language learners—though its tendency to embellish content raises concerns about potential misrepresentation and misinformation.
Gemini	Academic writing assistance: grammar, clarity, readability	Google Gemini demonstrates wide-ranging applications by enhancing learning through multilingual, conversational support (Baskara, 2025; Imran & Almusharrif, 2024; Prasodjo et al., 2025), driving business strategy and information retrieval with data-driven insights (Rane et al., 2024; Saeidnia, 2023), streamlining tasks in recruitment and accessibility (Moreira et al., 2024; Prathima, 2024), and supporting medical diagnostics and legal text analysis, though with limits on clinical accuracy and human judgment replacement (Hirosawa et al., 2024; Nizza, 2024).
Microsoft Copilot	Enhancing software testing efficiency with AI-driven automation	Microsoft Copilot enhances education by improving student performance, instructional design,

**Table 5 (continued)**

AI Tools Used by Academics	Primary Purpose	Citations
Scite.ai	Citation context analysis with "Smart Citations"	and creativity (Harun et al., 2024; Moeis et al., 2024; Ramos et al., 2024), boosts IT accuracy and security operations (Bono & Xu, 2024; Freitas et al., 2024), supports low-code development and finance automation (Jarunde, 2024; Ma & Praveen KS, 2023), and aids writing and research in higher education (Viacheslav, 2024), though risks of over-reliance, reduced creativity, and accuracy concerns in sensitive contexts remain (Harun et al., 2024; Romano et al., 2024).
Magicschool AI	AI-assisted lesson plan maker, youtube video question maker, rubric-maker	Scite.ai classifies citations as mentioning, supporting, or contrasting to improve contextual understanding (Nicholson et al., 2021), offers tools like a generative assistant, visualization dashboards, and retraction checks for research reliability (deLaubell, 2023; deLaubell, 2024), supports systematic reviews and bibliometric analysis (Basumatary et al., 2024), but faces accuracy challenges, particularly in distinguishing supporting and contrasting citations (Bakker et al., 2023).
Research Rabbit	Citation-based literature discovery with network visualization	The Magic School platform enhances education through personalized learning and gamification to improve student outcomes (Abdykerimova & Duisekenova, 2024), supports teacher training by increasing digital tool adoption (Molina et al., 2024), and enables collaborative curriculum design that fosters co-agency between educators and AI (Tilak et al., 2024).

fake information, biases, and hallucinations. Echo said, "As an educational tool, AI is highly functional. However, I believe precautions should be taken regarding its potential to steer higher education towards Western-centric directions in terms of the objectivity of scientific knowledge.". This concern is also touched upon in studies inquiring into the ethical challenges and critical evaluation of AI in academia and education (Bahr, 2024; Döger & Göçen, 2025; Raley & Rhee, 2023).

g) **Adapt teaching methods to incorporate AI technologies effectively:** Participants generally think that AI tools foster learning experiences that develop their students' 4Cs (critical thinking, creativity, communication, and collaboration) through AI and human-led processes. This includes active human agency with active teaching aided by AI, not fully-immersed in a path led by AI. This approach is linked to studies on AI-integrated 21st-century skills and highlights creativity and collaboration as essential elements of modern pedagogy (Holmes & Tuomi, 2022; Tuomi, 2022; Wicks & Paulus Jr., 2022).

h) **Recognize the importance of maintaining human expertise and judgment alongside AI usage:** Some participants, like Mike, emphasize that AI is an extension of the brain but not a replacement.

Echo said “*We must act with an awareness of the boundary between [human] originality and ease when using AI*”. This stance is displayed on AI studies that emphasize conscious and balanced integration of AI while safeguarding human expertise (Göcen & Döger, 2025; Karhiy et al., 2024). Furthermore, Karasek (1979) underscores the importance of autonomy and control in academic work, suggesting that AI integration must preserve academics’ agency to ensure motivation and well-being. Framing academics as Aidemics thus reflects an intentional stance towards AI that aims to resist cognitive over-reliance, support reflective engagement, and position AI as a complement to—rather than replacement for—human intellectual labor.

- i) **Advocate for equitable access to AI technologies in response to the digital divide:** Participants mentioned the need for academics and higher education systems to be aware of access and cost issues and to strive to bridge the digital divide. Vesna et al. (2025) argue against the risk of AI-powered education’s inequitable impact to enlarge the gap between different users, particularly due to the socio-economic conditions that could differ greatly among societal groups.

These qualities could form a new professional identity among academics—what we term “Aidemics.” Fostering this identity requires promoting the responsible, explainable, and reasonable use of AI while preserving human agency, ensuring that AI integration enhances academic work without compromising critical thinking or ethical standards.

This concept builds on Briggs’s (2005) observation that academic roles evolve in response to institutional pressures, technological change, and shifting expectations. Aidemics represent a contemporary extension of this evolution, demonstrating how teaching, research, and service are now mediated through AI technologies. While Briggs (2005) emphasized diversification and complexity, the Aidemics framework specifies how AI demands new competencies in ethical judgment, critical evaluation, and adaptive practice, positioning the human–AI relationship as a defining element of academic work today.

### 3.2. AI as a multifaceted tool in academia

Participants’ experiences highlight AI’s multifaceted roles in academia, functioning as a multi-tasking assistant, a brainstorming partner, and a transformative force in research and teaching. The integration of AI tools is reshaping academic workflows, enhancing efficiency, and expanding creative capacities. The coding structure underlying this theme is presented in Table 6.

Table 6 shows academics treating AI as an integrated partner in day-to-day work rather than a peripheral add-on. The most widely reported benefits cluster around productivity: participants consistently described AI as a multi-tasking assistant and a research/teaching fellow that streamlines editing and proofreading, supports grammar and style, triages literature, and produces quick summaries—freeing time for higher-order tasks and reducing reliance on external editing services. A second, strongly voiced benefit concerns creativity. Academics turn to AI as a

brainstorming companion to surface alternatives, expand perspectives, and kick-start idea generation while retaining human judgment over selection and refinement. A notable subset highlighted inclusion and equalization, emphasizing AI’s role in bridging language barriers and improving access for non-native English speakers, thereby widening participation in academic communication. Overall, the Table 6 indicates that AI’s immediate value is instrumental efficiency first, with creative augmentation and linguistic inclusion as important complementary gains.

#### 3.2.1. AI as a multi-tasking assistant

Participants emphasized AI’s role in streamlining complex tasks that traditionally required significant human resources. For instance, Alpha highlighted AI’s capacity to replace multiple roles with a single, efficient system, stating, “*Instead of manually taking notes from reports, I use tools to quickly take notes, check, and ensure the simplicity of report writing.*” This reflects how AI can consolidate and manage tasks that would otherwise necessitate a larger workforce, thus increasing efficiency and reducing operational costs. This perspective is consistent with claims that AI serves as an efficient assistant for literature reviews, methodology, data analysis, manuscript writing, and work organization (Lin, 2025), and it also resonates with arguments highlighting both the benefits and ongoing controversies of AI in academia (Wise et al., 2024), while others stress the ethical and practical disputes surrounding AI-based academic writing and authoring (Papakonstantinidis et al., 2024).

#### 3.2.2. AI as a brainstorming partner

Most participants also used AI for brainstorming and idea generation. AI tools, especially ChatGPT, were frequently employed to generate diverse perspectives on topics, aiding in the development of comprehensive lesson plans, research projects, and even email communication strategies. Victor mentioned, “*I use AI only to get ideas because of my experience... I explored it to see if I can develop lesson plans... so I don’t totally depend on it.*” This highlights the role of AI as a supportive tool in the creative process, helping academics to expand their thinking and explore new avenues in their work. This view is backed by studies emphasizing that AI enhances creativity and ideation processes by generating alternative perspectives and supporting academic innovation (Lin, 2025), while also pointing to the debates about the extent to which AI should be relied upon in intellectual tasks (Papakonstantinidis et al., 2024).

#### 3.2.3. AI in research and teaching

Participants discussed the potential for AI to revolutionize academic research, reducing the time and effort required for standard research processes. Romeo and Alpha mentioned the creation of Sakana AI, a tool designed to streamline academic research, suggesting that in the near future, researchers might primarily focus on decision-making and strategic direction in their fields, while AI handles the more time-consuming aspects of writing, data gathering and analysis. This represents a significant departure from traditional research methodologies, paving the way for more efficient and innovative approaches to knowledge

**Table 6**  
AI as a multifaceted tool in academia.

Codes	Categories	Theme	Frequency	Illustrative Quote
Editing, proofreading, grammar, daily tasks	AI as a Multi-tasking Assistant	AI as a Multifaceted Tool in Academia	14	“I use AI for proofreading.”
AI assist, research support, literature analysis, summary generation	AI as Research and Teaching Fellow		13	“I read 50 articles... I get AI to prepare analysis reports.”
Idea generation, brainstorming, creative support	AI for Creativity/Brainstorming		11	“I use AI only to get ideas...! don’t totally depend on it.”
Inclusive, language barrier reduction, equal access	AI for Inclusion and Equalization		10	The difference between nonnative and native speakers disappeared!”

Note: Frequencies represent the number of participants (out of 20 total) who mentioned concepts within each category at least once during their interview. The unit of analysis is the participant; multiple mentions by the same individual were counted only once per category. This note applies to all the following tables.

creation. On the one hand, this perspective supports arguments that highlight AI's capacity to transform academic workflows by automating repetitive tasks and allowing scholars to concentrate on higher-order intellectual work (Lin, 2025; Wise et al., 2024). On the other hand, it resonates with concerns about the ethical and practical challenges involved in adopting AI tools for research (Papakonstantinidis et al., 2024).

### 3.2.4. AI's role in inclusion and equalization

Despite challenges related to access and infrastructure, participants recognized AI's potential to be an inclusive and equalizing force in academia. Alpha highlighted a significant benefit of AI, particularly in overcoming language barriers that have historically disadvantaged non-native English speakers in academic publishing. Similar to Bravo, he noted that "*the difference between non-native and native speakers of English disappeared*," which has important implications for inclusivity in English-dominated academic environments. By leveling the playing field in terms of language proficiency, AI can help ensure that the quality of research is not overshadowed by linguistic limitations. This perspective reflects broader discussions on AI's role in promoting inclusivity within academia (Wise et al., 2024), yet it also draws attention to concerns about unequal access and the persistence of the digital divide (Vesna et al., 2025).

## 3.3. Challenges and ethical concerns in AI integration

Participants acknowledged AI's promise while raising shared, recurring concerns about integrity, privacy, equity, and cultural bias. In practice, AI can streamline academic work, yet it also introduces new vulnerabilities—from plagiarism risks to unequal access tied to premium features, and from insecure data handling to the reproduction of dominant, Western-centric discourses. These concerns point to a clear need for policy, governance, and capacity-building alongside adoption. Table 7 summarizes the coding structure (codes → categories → theme) with participant evidence.

Table 7 shows a clear, shared concern that AI's rapid uptake in academia is outpacing safeguards. Participants most frequently foregrounded academic integrity and misuse—worrying about originality, fabricated outputs, and blurred authorship. Data privacy and security emerged as another core risk, with unease about where information is stored, who can access it, and how breaches would be handled. Concerns about access and cost point to a two-tier ecosystem in which those with

**Table 7**  
Challenges and ethical concerns in AI integration.

Codes	Categories	Theme	Frequency	Illustrative Quote
Academic dishonesty, plagiarism risk, fakes	Integrity and Misuse Concerns	Challenges and Ethical Concerns	12	"AI raises issues of originality in student work."
Data privacy, insecure storage, insecurity	Data Privacy & Security		10	"AI tools store and use personal info.. risk of breaches!"
Digital divide, premium vs free versions, paid options, expenses	Access & Cost Barriers		10	"Free users are only wasting time, while premium users benefit."
AI colonialism, biases in AI, company power	Cyber Capitalism & AI Colonialism	Ethical Guidelines	9	"AI takes sides with European/American discourses."
Standards, rules, frameworks, explainable AI			8	"Frameworks, accreditations, and certification processes need to be regulated."

premium tools gain advantages while others fall behind. Participants also highlighted AI colonialism and bias, warning that systems can reproduce dominant Western discourses and institutional power. Across these issues runs a call for governance: clear standards, explainability expectations, and accreditation-style frameworks.

Taken together, the pattern suggests that responsible AI in higher education requires coupling innovation with integrity-aware assessment design, privacy-by-design infrastructure, equitable access and training, bias auditing and critical data practices, and formal institutional policies. Without these guardrails, efficiency gains risk entrenching new forms of unfairness and epistemic imbalance.

### 3.3.1. Access and cost issues: The digital divide

While AI tools offer transformative potential, their benefits are not equally distributed, leading to concerns about a growing digital divide. Participants in this study highlighted the critical role of financial resources and technological proficiency in accessing and effectively utilizing AI tools. The disparity between those who can afford premium versions of AI tools and those who rely on free, often limited versions is a source of concern for educators. One participant, Yankee, articulated this concern clearly, stating, "*We are also facing the risk that people who can afford to pay for premium services will not fall into the digital divide, while those who rely only on free access and cannot truly engage with these technologies may just be wasting time.*" This quote underscores the risk that the digital divide poses to educational equity. While those with financial means can fully engage with advanced AI tools, those who cannot afford premium versions are left with inadequate resources, which may hinder their academic and professional development at individual, institutional and country level. These concerns reflect broader discussions on the emergence of an "AI divide," pointing to the uneven distribution of AI opportunities and challenges (McElheran et al., 2024). Yet, some studies suggest that AI may also act as an equalizer, for instance by enabling translation and editorial support for non-native English speakers, thereby helping under-resourced academics disseminate their work globally and more equally (Pividori & Greene, 2024).

### 3.3.2. Academic laziness, dishonesty and integrity

As AI technologies, particularly LLMs, become more sophisticated, they can generate essays, reports, and other academic work with minimal human input but with high human likeness. This poses significant challenges for maintaining academic integrity. Yankee highlighted this issue, stating, "*AI raises issues of originality in student work, especially with the rise of tools that can generate essays and reports.*" This concern underscores the need for educators to rethink how assignments are structured to prevent the unethical use of AI by students. Interestingly, four academics from the normal users of AI tools group referred to academics as being lazier with use of AI tools. Zulu told that "*While technology provides convenience, it may also make academics lazier and provide the comfort of quickly accessing ready-made information. However, verifying the accuracy of the obtained information and conducting thorough research is essential. This necessitates accessing reliable sources for research. Additionally, I believe there is potential for negative consequences such as ethical violations.*" Xray added, "*The use of AI in research undoubtedly simplifies tasks, potentially leading academics to become lazier.*" These reflections are consistent with broader concerns in the literature, where scholars warn that the widespread availability of generative AI risks fostering plagiarism, over-reliance, and academic shortcuts, thereby undermining both originality and critical engagement in higher education (Chen et al., 2025; Cotton et al., 2023). At the same time, other perspectives argue that when integrated responsibly, AI can enhance integrity by supporting transparency and accountability through plagiarism detection tools (Leong & Zhang, 2025) or by fostering new forms of academic modeling that emphasize process over product (Kajiwara & Kawabata, 2024).

### 3.3.3. Data privacy and security issues

Participants also expressed significant worries regarding data

privacy and security. The use of AI tools often involves collecting and storing personal data, which can lead to unauthorized use or breaches if not properly managed. Sierra highlighted the data privacy issue with a specific example related to this study: “*For example, when you hand over these conversations to artificial intelligence, it becomes a form of privacy violation. Let us say, for instance, that right now you are telling me, ‘Professor, this will only be used for scientific purposes, and your identity will not be disclosed, etc.’ Alright, I give consent based on this rule, but then you have this rule transcribed (by an AI tool) and submit it...?*” He highlighted that AI tools used for academic tasks can create ethical problems if the tools and their sources are breached. These concerns reflect ongoing debates where data privacy and transparency are seen as central to AI ethics (Kondaveeti et al., 2024). Some studies, however, suggest that these risks could be mitigated through the kind of clear ethical guidelines and responsible use frameworks advocated in studies (Chen et al., 2025; Kajiwara & Kawabata, 2024).

### 3.3.4. Cyber capitalism and AI colonialism

Participants expressed deep concerns about the potential for AI (LLMs) to be leveraged in social engineering, manipulating behaviors, decisions, and even scientific paradigms at a societal level. This concern reflects broader anxieties about the role of AI in perpetuating existing power dynamics, particularly through the lens of Cyber Capitalism or AI Colonialism—a term that encapsulates the intersection of digital technologies, capitalism, and societal control (Qadir & Şentürk, 2024). This apprehension aligns with the concept of the ‘AI divide’ described by McElheran et al. (2024), highlighting the uneven distribution of AI opportunities and challenges across societies. Deepening these concerns is the risk of AI systems replicating and amplifying existing human biases; indeed, a study by Ganguly and Pandey (2024) demonstrates that AI tools can reproduce such biases. The manipulation of information, behaviors, and public opinion through AI is seen as a significant ethical issue, with historical precedents like the Cambridge Analytica scandal (Kanakia et al., 2019) serving as a stark warning for the future, as noted by Yankee in the interview. Echo highlighted “*its potential to steer higher education towards Euro-centric directions.*”. Participants emphasized the need to critically evaluate each LLM output rather than being directed by it.

### 3.3.5. The need for ethical guidelines

Given the ethical challenges posed by AI, participants argued for establishing universal ethical guidelines for AI usage in academia. This call from participants is strongly supported by recent literature, which increasingly emphasizes the need for clear ethical frameworks to ensure the responsible use of emerging technologies (Chen et al., 2025; Kajiwara & Kawabata, 2024). These guidelines would function similarly to existing academic integrity principles, providing a framework for the responsible use of AI in educational settings. Such a framework is seen as essential for navigating the complex ethical landscape of AI in education (Chaudhry et al., 2022). Establishing such guidelines is crucial for ensuring that AI is used ethically, and its benefits are realized without compromising academic values or individual privacy. This is particularly critical in addressing new challenges to academic integrity, such as AI-assisted plagiarism or “Aidemics” (Cotton et al., 2023), and in managing concerns around data privacy as AI-driven personalized learning becomes more widespread (Ismail & Aloshi, 2025). Accordingly, Romeo stated, “*In the field of artificial intelligence, frameworks, accreditations, and certification processes need to be regulated and supported, both in terms of ethical and quality standards.*”

## 3.4. Adapting to AI: Changes in education models

Adapting to AI integration requires significant changes in educational models in higher education, including restructuring assignments, addressing resistance, and enhancing AI literacy. These adaptations are essential to remaining effective in an AI-driven academic environment,

as explained by participants in Table 8.

Table 8 portrays a sector mid-transition: AI literacy and training are seen as the prerequisite for responsible adoption; resistance to change persists, echoing challenges from the shift to online teaching; there’s a clear sense of urgency to adapt to avoid obsolescence; and assessment reform is needed so tasks emphasize higher-order outcomes rather than AI-trivial work. In short, successful integration hinges on building capability, managing culture, moving quickly, and redesigning assessment.

### 3.4.1. Restructuring assignments and methods

Participants recognized that the rise of AI necessitates a reevaluation of how assignments and examinations are designed. This need aligns with recent literature, noting that AI tools challenge traditional assessments by facilitating academic dishonesty and creating an urgent need for novel ways of assessment methods, frameworks, and policies (Bobula, 2024). Tango emphasized the need to assign tasks that AI cannot easily replicate, stating, “*It’s necessary to assign tasks that AI cannot do, or cannot do yet. Or we need to use AI in assessment and evaluation. If you expect a person to produce a summary that AI can already generate, it means your teaching methods are outdated.*” This perspective suggests that educators should focus on fostering creative thinking and problem-solving skills that go beyond the capabilities of current AI technologies (Bobula, 2024).

### 3.4.2. Technological and cultural resistance

Despite the clear need for AI literacy, the integration of AI in academic settings is often hindered by both technological and cultural resistance. This resistance is particularly evident among individuals who are less familiar with these tools or who struggle to adapt to rapid technological changes. For example, Sierra commented that this resistance mirrors the challenges faced during the shift to online teaching during the pandemic, where educators with low Information and Communication Technology (ICT) literacy were forced into early retirement because they could not adapt as quickly as their digitally native counterparts. This resistance may also stem from epistemological concerns, as AI challenges established paradigms of knowledge production and academic authority (Arkan et al., 2023).

### 3.4.3. The consequences of failing to adapt

The rapid evolution of AI technologies creates a risk of educational programs becoming obsolete, highlighting a critical need for educators with practical AI knowledge and experience to lead transformations (Daher, 2025). Participants in this study also expressed concerns that those who cannot adapt to the wave of AI integration will be left behind.

**Table 8**  
Adapting to AI: Changes in education models.

Codes	Categories	Theme	Frequency	Illustrative Quote
AI literacy, AI training, AI awareness	AI Literacy & Training	Adapting to AI	12	“There needs to be an AI literacy course.”
Resistance, older academics retired during the pandemic	Resistance to Change		8	“Many professors couldn’t adapt to online teaching.”
Lagging behind, becoming obsolete	Failing to Adapt		8	“We need to move quickly to stay on track.”
New reforms, new assignments, restructuring exams	Restructuring Assignments and Methods		7	“If you expect summaries from students, your teaching method is outdated.”

However, they also mentioned that there are AI tools and digital resources available to help close the gap. Tango highlighted this issue, stating, *"In Türkiye, 99% of teachers, I repeat, 99% were appointed before AI applications emerged... It will be necessary to learn all of this through short-term courses. Therefore, micro-courses will become more popular."* This suggests a growing trend towards micro-courses and targeted training programs designed to quickly bring educators up to speed with AI technologies (Bulut et al., 2025).

### 3.4.4. Importance of AI literacy and mentorship

Given the complexity and rapid evolution of AI tools, participants emphasized the need for structured training and mentorship programs. These initiatives would help academics, particularly those less familiar with technology, to effectively integrate AI into their work. Sierra highlighted the risks of failing to adapt to these technological changes, drawing a parallel with the digital transformation triggered by the pandemic. He noted, *"During the pandemic, many professors, especially those over 65, retired... many academics couldn't keep up and said, 'It's best if I just retire.'* This example illustrates the consequences of not keeping pace with technological advancements, reinforcing the importance of ongoing education and support for academics.

Participants also stressed the importance of incorporating AI literacy into educational curricula across all disciplines. Mike remarked, *"It makes a lot of sense to include an AI literacy course in every field."* This statement reflects a broader recognition that AI literacy is essential not only for technology-related fields but for all areas of study. By demonstrating the practical use of AI tools in the classroom, academics can guide students in developing their own competencies with these technologies (Karanfiloglu & Bulut, 2025).

## 3.5. The future of academia in an AI-driven world

Participants anticipated that AI will reconfigure core structures of higher education, requiring not only technical integration but also philosophical reflection on purpose and values. They described four converging trajectories: (i) institutional integration of AI into learning platforms and university systems; (ii) an evolving teacher role from knowledge transmitter to mentor/coach; (iii) new program models emphasizing lifelong and modular learning; and (iv) re-thinking human purpose to center capacities that AI cannot replace. These are reflected in Table 9.

Across accounts under Table 9, the near-term future is framed as

**Table 9**  
The future of academia in an AI-driven world.

Codes	Categories	Theme	Frequency	Illustrative Quote
AI integration into systems, Canvas plugins, additions	Challenges and Institutional Al additions	The Future of Academia in an AI-Driven Integration	14	"Books are uploaded, AI answers student questions automatically."
Teachers as mentors, helpers, emotional guidance, roles	Evolution of the Teacher Roles	World	13	"Teachers will guide emotionally while AI answers factual queries."
New courses, lifelong learning, new education models	Shift in Education Models		12	"Four-year degrees will be replaced with short AI-driven courses."
Need for philosophical shifts, human type	Re-thinking Human Purpose		7	"We need to invest in humans who can shape future paradigms"

platform-centric and service-augmented, with AI woven into institutional systems to deliver personalized support at scale. The teaching profession is expected to pivot towards mentoring, social-emotional guidance, and the cultivation of judgment and values. Programs are projected to unbundle into shorter, stackable offerings to support lifelong learning. Finally, participants argued for a value-driven vision: as automation expands, universities should double down on the uniquely human—ethical reasoning, meaning-making, and the ability to shape new social and scientific paradigms.

### 3.5.1. Challenges to the standard model of education

The standard model of lecturing and fixed-term education is increasingly being questioned as AI facilitates lifelong learning and the rise of micro-courses on digital platforms (Bozkurt, 2023). Tango captured this sentiment, stating, *"X (blinded) University, a department in teacher education—it's unbelievable. Seventy-seven students have dropped out over the last three years. Seventy-seven students left this department, which has one of the highest admission rates in Türkiye! How can this be? It's happening. It will continue to happen. As a result, the traditional four-year higher education model will become obsolete. These matters will soon be resolved through short courses. This is very clear, and AI will play a significant role in this transformation."*

### 3.5.2. The need for philosophical shifts

As AI takes on more tasks, there is a growing need to invest in education that fosters philosophical reasoning and critical thinking—areas where AI currently has limited influence. Yankee cautioned against narrowing the focus of education to purely practical skills saying AI will handle the rest: *"Telling children to become painters, hairdressers, or mechanics... we are neglecting those who read, think, and can shape or create the future paradigms... pushing them into the service sector."* This underscores the importance of nurturing intellectual and philosophical development in students, preparing them to lead in an AI-driven future (Peters et al., 2023).

### 3.5.3. Change in traditional practices and higher education

Participants expressed concerns that certain traditional focuses, while important in the past, may become less relevant soon. Alpha articulated this view by highlighting the rapid advancements in AI tools for testing, assessment, and personalized feedback systems. He noted, *"Testing and assessment on a personal level, student follow-up systems, instant feedback systems, etc., will be developing under AI tools. While facing such a vision, we do not need to get focused on, for example, handwriting skills. Of course, they are still valuable, but if we experience the same speed change introduced as in phones, the future may not even have a place for keyboards."* Alpha's point on automating traditionally time-consuming tasks like testing and assessment aligns with arguments that AI can alleviate the increasing workloads and pressures placed on academics in the modern university system (Watermeyer et al., 2023). A critical argument, on the other hand, argues for the necessity of data literacy, AI literacy, AI ecosystem and tools, AI-relevant vocational and societal best practices to be in the league of AI competent individuals and societies (Feuerriegel et al., 2020; Hagendorff & Wezel, 2020).

The integration of AI into higher education's online systems was also emphasized as a crucial step towards creating personalized learning experiences. From an institutional perspective, a systemic approach is vital for enabling AI to enhance student learning, instructor development, research, and administrative tasks (Katsamakas et al., 2024). Oscar highlighted the need for this integration into university systems, stating, *"You define the books, feed them into AI, it reads them, studies the relevant sources, and automatically answers student questions... We need to take up such innovations and integrate them into our own systems... Because we should be transitioning to this now... This is something we need to communicate to students."* This reflects the growing recognition that AI can offer tailored educational support, making learning more responsive to individual student needs and preferences. Foxtrot added that *"I believe*

*the conscious and effective use of AI in higher education will play an important role in closing the gap in academic work.... Avoiding AI due to ethical concerns or continuing with traditional academic methods will widen this gap even further. Therefore, I strongly advocate for the integration of AI into higher education to establish a modern, technology-driven, and innovative approach to both teaching and learning, keeping pace with the times.”* Foxtrot’s warning about the widening gap between AI adopters and those adhering to traditional methods is echoed in the literature, which notes a heterogeneous institutional response to AI, with some being hesitant while others readily embrace the technology (Kshetri, 2024). Bravo noted, “*From now on, the extent and direction of human-machine or human-AI interaction will evolve... It's impossible not to use it.*” This indicates that AI will play an increasingly central role in education, reshaping how students and educators interact with learning materials and each other.

### 3.5.4. The evolution of the teacher’s role

The participants highlighted the potential danger that traditional teacher education programs face if they continue to focus on outdated methods and skills. Alpha predicted that in the coming decades, as AI tools become more sophisticated and closer to human intelligence, the role of teachers will shift significantly. He stated, “*My prediction is that within 10 years, as tools begin to approach human intelligence in a more meaningful way, students will turn to AI tools for questions and discussions rather than their teachers. Teachers will take on a role that focuses more on emotional guidance, imparting vision, and fostering socialization.*” To point to a potential paradigm shift, a study by Gentile et al. (2023) analyzes how AI is changing the teacher’s role, highlights limited awareness of its urgent challenges, and proposes a manifesto to guide its evolution through Kuhn’s paradigm shift concept. Kuhn’s analysis indicates that paradigm shifts are influenced not only by empirical data or logical reasoning, but also by social dynamics and emotional factors.

## 3.6. Human-AI collaboration: Balancing strengths

Some participants consistently framed AI as an augmenter of human work rather than a replacement. They emphasized that critical thinking, prompt engineering, and strategic decision-making remain distinctly human contributions. Collaboration was described as a co-learning process in which humans steer, verify, and refine AI outputs. The codes are reflected in Table 10.

As shown in Table 10, academics position AI as a cognitive amplifier—useful when directed, verified, and contextualized by people. Effective collaboration hinges on human agency: asking precise questions, exercising critical judgment, and making strategic choices about when and how to use AI. Productive practice is iterative—a feedback

**Table 10**  
Human-AI collaboration: Balancing strengths.

Codes	Categories	Theme	Frequency	Illustrative Quote
AI as extension of the brain, glasses for the mind, AI collaboration	AI as Extension of Human Capacity	Human-AI Collaboration	8	“AI is like an extension of the brain, not a replacement.”
Prompt engineering, value lies in questions, critical thinking	Prompting & Critical Thinking		8	“Which prompt to use, where, and why - that's critical.”
More AI, learning process, feedback loop with AI	Human-AI Learning Process		7	“We will produce more content with AI together.”

loop of prompting, checking, and refining—where humans set aims and standards while AI accelerates execution. In short, the value of AI emerges not from substitution but from human-led orchestration that turns the tool into an extension of expertise.

### 3.6.1. AI as an extension of the brain, not a replacement

The participants highlighted the role of AI tools in academic tasks, emphasizing their importance as extensions of human capabilities, particularly in managing tasks where human capacity and time might fall short (Firat, 2023). Mike pointed out a key condition: “*AI cannot replace academics if they focus on cultivating wisdom and delegate other tasks to AI.*” He stated, “*There is even some literature that refers to this as an ‘Extension of the Brain.’ In other words, we can think of AI as a tool that steps in when the human brain’s capacity falls short... AI can never replace an academic. It never will, not even until the end of time. Under what condition? If that academic operates at the level of wisdom.*”

### 3.6.2. Prompt engineering and critical thinking

As AI becomes more deeply integrated into academic work, the ability to craft effective prompts—specific instructions that guide AI tools in generating the desired output—has emerged as a crucial skill. The literature supports the view that this emerging skill offers numerous benefits. Effective prompt engineering enhances educational outcomes by aligning learning goals with program requirements (Sun, 2024), supports personalized learning by providing efficient and relevant responses (Heston & Khun, 2023), and fosters research and innovation by aiding in the solution of complex problems (Wang et al., 2025). Participants said creating these prompts is not merely a technical task but also requires a deep understanding of the subject matter and strong critical thinking skills. Oscar highlighted the critical role of asking the right questions, stating, “*We need to know which prompt to use, where, and why. For instance, there's a difference between saying, ‘Can you write me an academic paragraph about the image above based on the prompt I've given?’ and ‘Can you interpret the image above for me?’—this is just a simple example.*” This underscores the importance of precision and clarity in prompt design. This emphasis on precision underscores the need to evaluate prompt quality using metrics such as accuracy and fluency (Rathod & Kale, 2024). The field’s sophistication is further demonstrated by advanced techniques like “meta-prompting,” where LLMs are guided through templates for automatic prompt engineering, yielding higher performance (Ye et al., 2023). However, prompt engineering is not without its challenges, including issues of accuracy and bias (Heston & Khun, 2023), as well as ethics and privacy (Edemacu & Wu, 2024).

### 3.6.3. Growing human-AI interaction in the learning process

Participants view interaction with AI as a dynamic learning process, where both humans and AI improve through feedback and error correction. Tango emphasized this evolving collaboration: “*In the next step, it will transform how people produce, creating alongside AI... Therefore, we will be able to generate even more content and ideas together with AI.*” This highlights the potential for AI to enhance human creativity and productivity in learning environments. This dynamic interaction highlights the need for ‘seamless prompt teaching, continuous assessment, and redeployment models’ to maintain the quality and reliability of academic outputs (Ty, 2024).

Mike emphasizes the critical need for adaptation: “*From now on, you can neither conduct academic work nor manage higher education without AI.*” He further elaborates that future academic roles will involve more strategic thinking and decision-making: “*Humanity and higher education topics will focus more on what only humans can do, such as making decisions, developing policies in specific areas, determining which tools to use, and interpreting these tools. Essentially, AI will handle mundane tasks, allowing humans to focus on what it truly means to be human.*”. This is visible in studies by Kore (2022) and Shawe-Taylor and Dignum (2024) stating that advances in AI require reevaluating our relationship with intelligent systems and redefining sensory being, calling for a multidisciplinary

research agenda. This agenda should integrate sensory-centric communication to support education, informed citizenship, and effective AI regulation.

### 3.7. Limitations and skepticism towards AI

Participants maintain skepticism towards AI, acknowledging its limitations and emphasizing critical evaluation. Concerns about inaccuracies, data gaps, and the necessity of human oversight are highlighted in [Table 11](#).

The pattern in [Table 11](#) portrays pragmatic skepticism. Participants value AI's speed but repeatedly flag hallucinations and fabricated citations, shallow or skimming-level knowledge, and blind spots from lack of access to subscription databases. In this framing, AI is a useful yet unreliable assistant—helpful for acceleration, not authority. Two norms follow from this stance. First, a human-in-the-loop workflow is non-negotiable: verify claims, trace sources, and privilege domain expertise over AI outputs. Second, there is a push for responsible disclosure—treating AI like other analytical tools (e.g., SPSS/R): state when, how, and for what tasks it was used. Overall, enthusiasm is tempered by caution: AI is seen as incremental and time-saving rather than transformational, unless paired with rigorous oversight, source access, and transparent reporting.

#### 3.7.1. Schizophrenic AI and hallucinations

Participants expressed concerns about AI-generated “hallucinations,” where AI produces inaccurate or misleading information, likening it to schizophrenia. Sierra warned, “*It’s like dealing with a schizophrenic—be careful, it says things but occasionally slips in something that can ruin you.*” Romeo noted, “*I felt the sentences were very fake... When I checked on Google, I found that five weren’t accurate, two weren’t like that, and three were completely off.*” Similarly, Lima added, “*I believe the output was not correct in most cases, with the core points of the discussion being missed.*” These issues underscore the need for critical oversight when using AI tools. [Sun et al. \(2024\)](#) explains in their study by categorizing distorted information in AI-generated content using ChatGPT as a case study, identifying 8 main error types and 31 subtypes, thereby offering a comprehensive framework to guide risk assessment, user awareness, and the improvement of AI tools.

#### 3.7.2. AI limitations

Concerns were raised about becoming overly reliant on AI, which often pulls from open-access sources while overlooking critical

**Table 11**  
Limitations and skepticism towards AI.

Codes	Categories	Theme	Frequency	Illustrative Quote
Hallucinations, fake citations, superficial results, biases	Schizophrenic AI / Hallucinations	Limitations & Skepticism	12	“AI is like a schizophrenic — slips in fake info that can ruin you!” (Hakan)
Surface-level knowledge, open access only, skimming	AI Limitations in Depth		10	“AI misses subscription databases, so big gaps exist.” (Özcan)
AI is like a calculator, not yet a game-changer	Balanced Skepticism		7	“AI is not revolutionary, just time-saving for now.”
Transparency in usage, responsible use	Responsible Disclosure		7	“Like SPSS or R, we must report AI use in papers.”

academic resources. Tango remarked, “*The output is only as good as the data it’s working with,*” pointing out that AI’s results depend on the available data. Oscar further noted, “*I realized it couldn’t access certain resources,*” stressing that AI tools might miss significant sources from subscription-based databases. Thus, AI is limited by the scope of the data it accesses. Studies similarly show that while AI might seem creative, it functions within constrained datasets, requiring users to remain aware of these limitations ([Davis, 2024](#); [Selwyn, 2024a, 2024b](#)).

#### 3.7.3. Balanced skepticism and critical evaluation

Despite extensive AI use, participants maintained a critical stance towards its limitations. While they acknowledge AI’s ability to structure and assist with tasks, they emphasize that it often lacks the depth, creativity, and critical thinking needed for high-level academic work. They caution against over-reliance on AI, particularly in research, ensuring that AI outputs are carefully vetted and supplemented with human insight. Alpha noted, “*Tools like ChatGPT, Claude, Consensus, and Typeset have become part of my daily life, but knowing when and where to use them is crucial. Even among similar language models, their efficiency varies in different areas.*” November criticized these tools: “*AI encourages laziness. It is not appropriate.*” [Selwyn \(2024a, 2024b\)](#) points out this by examining the simultaneous rise and backlash of artificial intelligence in education, highlighting its rapid adoption, investment, and optimism alongside growing regulatory, societal, and academic critiques, and argues that engaging with these controversies is crucial for shaping the field’s future.

#### 3.7.4. Transparency in AI usage

The participants advocate for transparency in the use of AI tools in academic work, suggesting that scholars should disclose when and how AI was utilized to maintain ethical standards. Bravo, for example, noted that using AI is no different from employing tools like SPSS, emphasizing that such usage should be reported to prevent unethical perceptions. Bravo even documented all his work on Google Drive to track raw formats, using AI for editing and clearly reporting its use in academic papers. This approach ensures transparency, with the priority placed on highlighting the original human contribution ([Radanliev, 2025](#)).

### 3.8. Rapid technological change and leadership

Participants emphasized that rapid technological shifts require adaptive, agile leadership in higher education. Consistent with the literature, leaders who integrate AI into workflows and model responsible use are seen as catalysts for flexible, innovative teams ([Chughtai et al., 2023](#); [Shal et al., 2024](#)). Program restructuring and leadership development are, therefore, essential. [Table 12](#) summarizes how these ideas surfaced in the data.

Participants argue that universities need leaders who demonstrate ethical, transparent AI use; reshape structures and curricula as roles and workflows evolve (e.g., refocusing programs whose core tasks are being automated); and build trust through open communication about where, why, and how AI is deployed. More broadly, they position AI within a continuum of technological flux and adaptability/agility, suggesting

**Table 12**  
Rapid technological change and leadership.

Codes	Category	Theme	Frequency	Illustrative Quote
Adaptive leadership, role modeling, ethical AI use, need for restructuring leaders, AI disruption	Adaptive & Agile Leadership	Leadership in AI Age	10	“We need agile leaders... In 15 years, we may be discussing the use of cybernetic organisms.”

that preparedness, not prediction, is the defining leadership competency in AI times.

### 3.8.1. Higher education leadership in AI age

The rapid pace of technological advancement requires leaders who are agile and adaptable. Yankee emphasized this need, stating, “*Five years ago, we were talking about something else instead of AI, and in fifteen years, we may be discussing the use of cybernetic organisms.*” This underscores the necessity for leaders to stay ahead of technological trends that could reshape academia.

There is a growing need for leaders to restructure higher education programs to align with AI advancements. Oscar suggests, “*I think it's highly likely that translation services will cease to exist in the near future.*” He explains that while AI will transform certain professions, this doesn't necessarily mean closing departments but rather shifting their focus. Graduates might be expected to work on developing language systems or managing the emotional components of texts, rather than engaging in direct translation work. Agile and adaptive leaders are expected to lead these changes to align new big changes. To manage such transformations, [Tursunbayeva and Gal \(2024\)](#) suggest that an ecosystem approach is essential and that a rubric or framework-based checklist can guide digital leaders in adopting AI within their organizations.

The integration of AI into academia necessitates a new kind of leadership that is technologically savvy and forward-thinking. Mike emphasizes the critical need for adaptation: “*From now on, you can neither conduct academic work nor manage higher education without AI.*” Future academic roles will involve more strategic thinking and decision-making, focusing on areas where human judgment is irreplaceable. This new role involves AI-augmented decision-making, which enables data-driven actions, provided that leaders remain attentive to ethical concerns ([Wang, 2021](#)). However, this integration can also present challenges, such as miscommunication between leaders and team members, thus requiring careful management ([Hauptman et al., 2024](#)). Taking the discussion a step further, some studies offer a radical counter-perspective by arguing for an automated AI system over human leadership, suggesting it could better analyze and respond to workers' needs ([Quaquebeke & Gerpott, 2023](#)).

## 4. Conclusion

This study examined the evolving role of artificial intelligence in higher education and introduced the concept of *Aidemics*, academics who actively integrate AI into their professional work. By analyzing the experiences and perspectives of participants, the research provides a broad picture of how AI is reshaping teaching, research, and administration, as well as how academics are redefining their identities and practices in the AI era.

One of the central findings is the emergence of Aidemics as early adopters of AI tools. These individuals demonstrate strong AI literacy, efficient prompting skills, and a critical understanding of AI's strengths and limitations. They view AI not as a replacement for academic expertise but as a partner that supports intellectual productivity and streamlines repetitive tasks. For many, AI serves as an enabling force that frees time for higher-order activities such as creativity, critical thinking, and innovation. However, participants also acknowledged that AI integration generates tension, particularly around originality, authorship, and academic identity, raising questions about what it means to create knowledge in collaboration with machines.

The research highlights both opportunities and challenges in this transformation. On the positive side, AI is seen as an indispensable assistant, capable of enhancing efficiency and doubling knowledge production in some areas. It supports administrative functions, expands the scope of research possibilities, and facilitates new forms of teaching and learning. Skills such as prompt engineering are emerging as crucial epistemic practices, enabling academics to harness AI's capabilities more effectively. Leadership within institutions also plays a decisive

role, as adaptive and forward-thinking leaders can guide this transition while ensuring that ethical, pedagogical, and operational dimensions are carefully balanced.

On the other hand, significant barriers remain. Participants pointed to inequalities in access and use, reflecting the existence of an emerging AI divide that risks exacerbating existing disparities within higher education. Emotional factors, such as anxiety and ambition, were also found to influence how academics engage with AI, raising the possibility of unethical practices. Ethical concerns were a recurring theme, particularly regarding data privacy, authorship, intellectual integrity, and the risk of devaluing human expertise. AI's limitations, including unreliable or misleading outputs, further underline the continued importance of human judgment and critical evaluation.

The study also found that perceptions of AI's impact vary widely. Some participants see it as a potential game changer, while others believe its influence is overstated or even detrimental, fostering academic complacency. Across these perspectives, a shared emphasis emerges: AI should be understood as an extension of human intelligence rather than a substitute. Maintaining human agency and ensuring that AI remains an augmentative tool is central to sustaining academic integrity and meaningful scholarship.

Taken together, the findings suggest that higher education is at a pivotal moment. The integration of AI is not merely a technological shift but a systemic transformation that demands rethinking the roles of educators, institutions, and students. Developing AI literacy is critical for both academics and learners, equipping them with the competencies necessary to navigate and co-create an AI-driven educational environment. Teacher education programs, in particular, must assume a leadership role in this transformation, embedding AI training, ethical frameworks, and innovative pedagogies into their curricula. This proactive approach is essential for safeguarding the sustainability of higher education and preparing future generations for the complex realities of an AI-saturated world.

Finally, the study recognizes the limitations of AI itself. Despite its capacity to enhance productivity, AI systems can generate errors, propagate biases, and reinforce existing power structures. These challenges highlight the importance of critical oversight, ethical governance, and inclusive practices to ensure that AI contributes to equitable and diverse knowledge production rather than perpetuating inequality.

### 4.1. Policy and practical recommendations

The findings call for higher education institutions to take deliberate steps in shaping responsible AI integration. First, universities should establish clear ethical guidelines and training programs to address issues of integrity, authorship, and privacy in AI use. Second, policies must ensure equitable access to AI tools, preventing the creation of a digital divide that disadvantages under-resourced institutions and communities. Third, investment in AI literacy should be prioritized across all levels of academia, with structured programs that equip both faculty and students with practical competencies such as prompt engineering and critical AI evaluation. Finally, institutional leaders must adopt adaptive strategies that balance innovation with ethical safeguards, fostering environments where AI is embraced as a supportive partner while preserving the irreplaceable role of human wisdom, creativity, and critical thought.

### 4.2. Limitations and future research

While this study offers an initial conceptualization of *Aidemics* and insights into academics' experiences with AI, further research is needed to deepen and broaden understanding. Future studies could examine more geographically diverse samples to explore the applicability of the framework across different cultural and institutional contexts. Quantitative and mixed-method approaches may complement interview-based findings by measuring the prevalence of Aidemic practices and their

impact on teaching, research productivity, and academic identity. Longitudinal research could also trace how engagement with AI evolves as technologies, policies, and ethical debates develop. Importantly, future work should investigate the training and education needs of academics, including how AI literacy, ethical awareness, and critical prompting skills can be systematically fostered through professional development and curricular initiatives. Finally, comparative studies across disciplines may reveal distinct academic practices, thereby refining and expanding the model of responsible human–AI collaboration in higher education. Last but not least, while participants used a range of AI tools, much of the focus was on large language models (LLMs), which may not fully capture the diversity of AI applications in academic work. Future research should consider a broader spectrum of AI tools to deepen our understanding of how AI is transforming higher education worldwide in academic and administrative aspects through academic, social, technical and psychological dimensions.

### CRediT authorship contribution statement

**Adem Yurdunkulu:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Mehmet Akin Bulut:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization. **Ahmet Göcen:** Writing – review & editing, Writing – original draft, Methodology, Conceptualization.

### Ethical standards statement

Ethical approval was obtained from Afyon Kocatepe University Ethics Committee on 20.11.2024 with ID no: 2024/362. Informed consent was obtained from each participant before conducting the interviews.

### Declaration of Generative AI and AI-assisted technologies in the writing process

While preparing this paper, the researchers used AI tool (ChatGPT) to proofread all texts and translate quotes from Turkish to English with minor corrections by the researchers. Following these services, the researchers reviewed and validated the tasks performed by this tool.

### Declaration of competing interest

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During the preparation of this work, the author(s) used “grammally v2” provided by the university official library in order to edit and improve the language. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

### Data availability

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

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